UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,507	04/06/2001	Tri Minh Nguyen	81855.0008	6108

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EXAMINER
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ART UNIT	PAPER NUMBER
2125	10

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant argues that Thiel and Goss do not describe that the inspecting stations are uniquely identified and that their identities are tracked further through the manufacturing process.   However, a new reference has been introduced to illustrate that this is a well-known feature of product assembly tracking systems, and thus this feature does not have patentable weight.

Drawings

2.   This application has been filed with informal drawings, which are acceptable for examination purposes only.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 2, 5-20, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel et al. U.S. Patent No. 6,381,509 in view of Goss U.S. Patent No. 6,236,901, and further in view of Chen et al. U.S. Patent No. 5,726,920. Regarding claims 1, 2, 9-15, 18-20, and 22-25, Thiel discloses a method of monitoring the manufacturing status of a machine comprising the steps of: assigning a machine identifier to a machine comprised of one or more components, each one or more components to be incorporated into the machine at one or more production stations,

wherein each one or more production stations is assigned a production station identifier (e.g., col. 3 lines 23-36); inputting the machine identifier into at least one memory of a first computer; inputting a unit control identifier for each one or more components wherein the unit control identifier is linked to the production station identifier where the unit control identifier is input (e.g., col. 9 lines 13-27); inputting defect information for each one or more component into the memory at an inspecting station, wherein the defect information includes at least one defect phenomenon (e.g., col. 9 lines 13-27); linking the stored unit control identifier and the stored machine identifier (e.g., col. 7 lines 19-23); outputting defect information which includes at least one of the machine identifier and the unit control identifier, wherein the machine history in manufacturing is traced later (e.g., col. 3 lines 43-47);

wherein the machine identifier and the unit control identifier are input by scanning bar codes assigned to the machine and the component (e.g., col. 4 lines 12-22); wherein said output is displayed on a second computer that is connected to the first computer through a network (e.g., Fig. 1); further comprising the step(s) of: inputting the time when said defect phenomena occurred (e.g., col. 1 lines 38-39); wherein said output is accessed in real time (e.g., col. 11 lines 6-12); wherein the information in the memory can be retrieved by selecting at least one of the machine identifier, the unit control identifier, and the production station identifier (e.g., inherent in col. 9 lines 13-27 since all are linked); wherein the information in said memory can be sorted by using at least one of the machine number, the unit control identifier, and the production station identifier (genealogy server/host computer inherently capable of this performing this

task); wherein the output is printed out daily (e.g., implied in col. 6 lines 57-60, col. 13 lines 10-12); further comprising the step of: calculating the number of detected defects (e.g., col. 12 line 59 – col. 14 line 43); wherein said outputting process comprises the steps of: counting the number of times of said defect and the number of times of manufactured component (e.g., col. 13 lines 18-20); calculating statistics which relate to said defect automatically; and outputting said calculated statistics (e.g., col. 12 lines 59-60); wherein the defect information includes at least one of defect rates and rates with out defects (e.g., claim 51); further comprising the steps of: inputting the at least one defect phenomena for each machine into the memory at a quality assurance station (e.g., col. 12 line 59 – col. 13 line 20).

Regarding claims 1, 5-8, 16, 17, and 22, Thiel et al. does not specifically disclose inputting a business function identifier into the memory, wherein the business function identifier identifies the party responsible for resolving at least one defect phenomena; inputting a resolving method for the at least one defect phenomena; wherein the resolving method is selected from a list of pre-stored resolving methods; wherein the selected resolving method is stored in the memory for later use; replacing a defective component with a new component by implementation of the resolving method; selecting designating stations among said responsible business functions to send message through said network to said selected responsible business functions; and selecting at least one of said business functions to see messages that are sent from said selected stations. However, Goss discloses a method for assembly of computer systems in a build-to-order environment comprising: inputting a business function identifier into the

memory, wherein the business function identifier identifies the party responsible for resolving at least one defect phenomena; inputting a resolving method for the at least one defect phenomena; wherein the resolving method is selected from a list of pre-stored resolving methods; wherein the selected resolving method is stored in the memory for later use; replacing a defective component with a new component by implementation of the resolving method; selecting designating stations among said responsible business functions to send message through said network to said selected responsible business functions; and selecting at least one of said business functions to see messages that are sent from said selected stations (e.g. col. 6 lines 29-53, col. 7 line 66 – col. 8 line 42, col. 9 line 51-63). Thiel and Goss are analogous art because they both pertain to monitoring and tracking control in manufacturing and component assembly environments. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Thiel with Goss in order accurately locate the cause of the defects disclosed in Thiel and to efficiently repair the defect or replace the defective component, as taught by Goss.

Regarding claims 1, 20, and 22, Thiel-Goss discloses linking the defect information to the respective component identifier. Thiel-Goss does not specifically disclose that the defect information includes the relevant inspection station identifier or quality assurance station identifier. However, Chen discloses a watchdog system for monitoring a semiconductor wafer testing line comprising inputting defect information for components into memory at an inspection station and quality assurance station apart from any of the production stations, wherein each inspection station and quality

assurance station is assigned a station identifier, so that the defect information and the

unit control identifier are linked to the inspection station/quality assurance station where

the defect information is input (e.g. col. 3 line 57 – col. 4 line 35, claim 1, claim 8).

Chen, Thiel, and Goss are analogous art because they all pertain to monitoring and

tracking control in manufacturing and component assembly environments. Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention

was made to modify Thiel-Goss with Chen in the above manner since Chen teaches

that such a modification enables one to determine whether component failures are due

to test procedure errors, test equipment problems, or actual manufacturing defects.

5.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel-

Goss-Chen as applied to claim 1 above, and further in view of Hopkins et al. U.S.

Patent No. 6,507,765. Thiel-Goss-Chen does not specifically disclose the steps of:

inputting a second machine identifier into the memory, wherein the second machine

identifier is assigned to each machine and is different from the first machine identifier;

counting an input quantity at a production station based on the stored first machine

identifier and an output quantity from a second production station based on the stored

second machine identifier; and generating a work-in-process number from at least the

input quantity and the output quantity. However, Hopkins discloses a computer

integrated manufacturing control system comprising fixed bar code scanners each

associated with a processing machine for reading a bar code on each item that enters

or leaves a particular processing machine for work-in-process tracking (e.g. col. 5 lines

46-58). Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to modify Thiel-Goss-Chen with Hopkins et al. since

Hopkins et al. teaches that this feature can increase oversight and control of the

manufacturing process by tracking and making a data record of all relevant

manufacturing activities.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

    Crispin et al. U.S. Patent No. 4,953,277

    Pence et al. U.S. Patent No. 5,978,751

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ryan A. Jarrett whose telephone number is (703) 308-

4739. The examiner can normally be reached on 10:00-6:30 M-F.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

                                                    Ryan A. Jarrett
                                                    Examiner
                                                    Art Unit 2125

3/18/04

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100